

## Bauer, Candice

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**From:** Bauer, Candice  
**Sent:** Thursday, June 13, 2013 11:22 AM  
**To:** Skalski, Chris; Wirick, Holiday  
**Subject:** RE: Queen Acres Copper WER Report

Thanks Chris. It appears that they measured both total and dissolved copper concentrations in the laboratory water and site water and thus got different total and dissolved WER values. So, that seems to answer my question about how they came up with the different values.

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**From:** Skalski, Chris [mailto:Chris.Skalski@epa.state.oh.us]  
**Sent:** Wednesday, June 12, 2013 11:53 AM  
**To:** Wirick, Holiday; Bauer, Candice  
**Subject:** FW: Queen Acres Copper WER Report

As another follow-up from last week, I recall you had asked about the WER for dissolved and total recoverable. I've attached the report, and clipped a section from page 11 of the report below. It looks like they had slightly different WERs based on the dissolved versus total recoverable forms of copper.

#### **A. Final Determination of the FWER for Dissolved Copper**

1. The adjusted geometric mean of all of the Type I dissolved copper WERs (samples) is 8.684
2. The lowest hWER (excluding the secondary species hWER) in Table 20 is

**Based on the language provided above, the FWER for dissolved copper is 8**

#### **B. Final Determination of the FWER for Total Recoverable Copper**

1. The adjusted geometric mean of all of the Type I total recoverable copper (August samples) is 9.302
2. The lowest hWER (excluding the secondary species hWER) in Table 21 is

**Based on the language provided above, the FWER for total recoverable copper is 9.302**

Based on the results obtained in this study, GLEC recommends the FWERs for dissolved copper of 8.684 and 9.302, respectively.

#### **C. Assessment of the FWER's for Modification of the QAWWTP NPDES Permit**

Based on the results obtained in this study, GLEC recommends the FWERs for dissolved copper of 8.684 and 9.302, respectively.

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**From:** Adam Sackenheim [<mailto:sackenheim@butlercountyohio.org>]

**Sent:** Friday, November 04, 2011 1:12 PM

**To:** Sarle, Ned

**Cc:** Skalski, Chris

**Subject:** RE: Queen Acres Copper WER Study Plan

I'll send report and appendix materials in several emails to prevent overloading your in-box. Please call if you have any questions or concerns about the report. Much thanks.

Adam M. Sackenheim  
BCWS - Regulatory Compliance Mgr.  
130 High St. - Hamilton, OH 45011  
513.887.5563 (Office) | 513.309.1253 (Cell) | 513.887.3786 (Fax)

>>> "Sarle, Ned" <[Ned.Sarle@epa.state.oh.us](mailto:Ned.Sarle@epa.state.oh.us)> 11/04/2011 9:44 AM >>>

Adam:

Please provide Chris Skalski, DSW, CO and me with an electronic copy of this report. A later date we may need to ask for a hard copy.

If you have any questions, please contact me.

Thanks...

Ned Sarle  
Ohio EPA, Southwest District Office  
Division of Surface Water  
401 East Fifth Street  
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**From:** Adam Sackenheim [<mailto:sackenheim@butlercountyohio.org>]  
**Sent:** Thursday, November 03, 2011 3:36 PM  
**To:** Sarle, Ned  
**Cc:** Sue Vance  
**Subject:** Re: Queen Acres Copper WER Study Plan

Ned -

The Queen Acres Cu WER study is complete. Per permit, I need to send a copy of the report to OEPA for review before we proceed w/ a permit modification request. Should the report go to you, or someone else? I have it electronically or as a hard-copy; please let me know which is preferred, or both.

Thanks Ned.

Adam M. Sackenheim  
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>>> "Ned Sarle" <[Ned.Sarle@epa.state.oh.us](mailto:Ned.Sarle@epa.state.oh.us)> 04/22/2011 1:52 PM >>>

Adam:

Your proposed changes are acceptable to us. Please proceed with the proposed study.

If you have any questions, please contact me.

>>> "Adam Sackenheim" <[sackenheim@butlercountyohio.org](mailto:sackenheim@butlercountyohio.org)> 4/18/2011 2:51 PM >>>  
Ned, Chris -

Butler County would like to propose one final change to the WER Study Plan for Queen Acres - see attached. In summary, we just wanted to clarify in the Plan that the first WER event - to be collected and tested in early May - is to correlate with high flow stream conditions, while the final WER event - to be collected in late August - is to correlate w/ low flow stream conditions.

The Study Plan as approved 3/28/11 indicates that the first WER will simulate low-flow conditions, which is not correct.

Please advise as to the acceptability of this revision.

Much thanks.

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>>> "Ned Sarle" <[Ned.Sarle@epa.state.oh.us](mailto:Ned.Sarle@epa.state.oh.us)> 03/28/2011 2:11 PM >>>  
Adam:

As I discussed with you today, Chris Skalski and I have reviewed your proposed changes and found them to be acceptable. The proposed WER Study Plan for Butler County Queen Acres WWTP is acceptable to the Ohio EPA. The county should proceed with the work outlined in this plan.

If you have any additional questions or comments, please contact me.

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>>> "Adam Sackenheim" <[sackenheim@butlercountyohio.org](mailto:sackenheim@butlercountyohio.org)> 3/24/2011 12:22 PM >>>  
Chris, Ned -

Please find attached, revised WER Study Plan for Queen Acres. Most of your comments and suggestions were incorporated into the plan. Two suggestions that were not incorporated, and rationale for their exclusion, are as follows:

Comment 4. "According to the SOP, both mortality and immobilization are used as the endpoints (which I agree with). As such, you should probably express this as an EC50 rather than an LC50."  
Response: Great Lakes Environmental Center (GLEC) states that 'immobilization is considered mortality, so LC50 is appropriate'.

Comment 13. "I did not see anything that discussed range-finding tests as described in G& on pages 51-52. Is these expected toxicity of the effluent and WER dilutions relatively well known?"  
Response: Rather than doing a range-finding test, we (GLEC) run 8 or 9 concentrations. That way we capture the LC50 and still use a 0.6 or 0.7X dilution factor (i.e., narrow range between test concentrations). Using a range-finding test

would require (1) using the effluent and site waters after they have been in cold storage a few days or (2) resampling.

If this plan as updated is satisfactory to you, please let me know so that I can coordinate the scheduling of WER #1 in the next month or so. If you have any questions, feel free to call or email me. Thanks for your time.

Adam M. Sackenheim  
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>>> "Chris Skalski" <[Chris.Skalski@epa.state.oh.us](mailto:Chris.Skalski@epa.state.oh.us)> 03/16/2011 10:02 AM >>>  
Adam,

Yes, please send us a revised copy of the study plan to review. Our review would focus on revisions made to the initial study plan based on the comments we sent, so it should not take very long to review. Assuming everything looks good, we can approve it as a final study plan so that you can proceed with implementation.

Chris

We should review their revisions to see if they adequately addressed our comments. If so, we should notify them in some fashion (i.e., phone, e-mail, letter) that their final plan is acceptable to the Ohio EPA.

If you have any questions, please contact me.

>>> "Adam Sackenheim" <[sackenheim@butlercountyohio.org](mailto:sackenheim@butlercountyohio.org)> 3/14/2011 9:06 AM >>>  
Thank you for these comments Chris.

Assuming Butler County incorporates these comments / changes into our WER plan, will another review be required or can we proceed directly with the study?

Regards,

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>>> "Chris Skalski" <[Chris.Skalski@epa.state.oh.us](mailto:Chris.Skalski@epa.state.oh.us)> 03/11/2011 1:12 PM >>>  
Adam,

Please see the comments embedded within the proposed WER study plan submitted to Ohio EPA. Overall, the plan appears to be thorough, clear and well-written.

Please let me know if you have any questions.

Chris

Chris Skalski  
Ohio EPA  
Division of Surface Water  
Water Quality Standards Unit  
614.644.2144  
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Ohio Environmental Protection Agency  
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